

IN THE CLAIMS:

1. (Currently Amended) ~~Process~~ A method for programming an automation application program on an automation equipment programming station ~~that comprises,~~ the method comprising:

~~[-]~~ a step to define ~~generating definitions of each of a plurality of structured type objects (1.10, 1.20) each representing an input-output channel of an input-output module of the an automation equipment, the definition of each structured type object comprising~~ including at least one characteristic element (1.11) corresponding to input-output information exchanged between the input-output module and the application program, and ~~the a~~ a relative topological address of the input-output information for each said element; ;

~~[-]~~ a step to write an application program (10), declaring symbolic input-output variables (100) of the application program (10) as an instance of a previously defined structured type object; ;

~~[-]~~ a step to configure configuring symbolic input-output variables of the application program comprising a definition of ~~the a~~ a physical location of each input-output module of ~~the such~~ such automation equipment associated with the

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symbolic input-output variables ~~(100)~~ of the application program; and

~~[]~~ a step ~~(40)~~ to automatically interpret interpreting the application program ~~to execute it~~ for execution on the such automation equipment, comprising a ~~step to replace~~ replacing said symbolic input-output variables ~~(100)~~ in the application program ~~(10)~~ by ~~the~~ with a complete topological address ~~(200)~~ of the said corresponding input-output information.

2. (Currently Amended) ~~Programming process~~ The programming method according to claim 1, characterized in that wherein each said symbolic variable ~~(100)~~ of the application program comprises two fields, a first field ~~(101)~~ comprised of comprising a character string chosen by the ~~an~~ application program designer, wherein the method further comprises making so that a structured-type object can be made to correspond with to the symbolic variable ~~(100)~~, and a second field comprising ~~(102)~~ composed of an identification of an element of the structured-type object associated with the symbolic variable ~~(100)~~.

3. (Currently Amended) The programming method
~~Programming process according to claim 1, characterized in~~
~~that~~wherein said replacing said symbolic input-output
variables the replacement step comprises:

~~[-] a step (34) to search~~searching for the relative
address defined for each structured-type element in a table
(1.1, 1.2) of elements of a structured-type object stored on
the a programming station;

~~[-] a step (32) to search~~searching in a configuration
table for the said defined physical location declared for each
module ~~that the designer has associated with symbolic input-~~
output variables (100) of the application program; and

~~[-] a step (33, 35) to construct the~~constructing an
exact topological address of each symbolic variable (100) of
the application program, using a means for interpretation
~~means of an application program~~ on the programming station,
starting from the relative address and the physical location
definition found by said searching in a configuration table.

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4. (Currently Amended) The programming method
~~Programming process~~ according to claim 1, ~~characterized in~~
~~that the step to define~~ wherein said generating definitions of
each of a plurality of structured type objects comprises a
~~step to create~~ creating a table (1.1, 1.2) of structured type
object elements comprising a first column ~~containing~~
comprising at least one identification of a characteristic
data of the structured ~~type object~~, a second column
~~comprising~~ containing the an elementary data type (EDT) and a
third column ~~containing~~ comprising the relative address of the
data of the structured object, and then ~~memorizing~~ storing
~~this said table in portable memory means~~, for each structured
type object.

5. (Currently Amended) The programming method
~~Programming process~~ according to claim 3, ~~characterized in~~
~~that~~ wherein the table (1.1, 1.2) of structured object ~~type~~
elements comprises a fourth column ~~containing~~ comprising a
description of the data of the structured object, and a fifth
column ~~comprising~~ containing read or write rights for each said
data of the structured object.

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6. (Currently Amended) The programming method
~~Programming process according to claim 1, characterized in~~
~~that the process comprises a step to configure further~~
comprising configuring input-output modules comprising a step
~~to select~~selecting a commercial reference of an input-output
module, and assignment ~~of~~assigning an ~~the selected input-~~
output module associated with the selected commercial
reference to a determined physical location, ~~the~~
~~interpretation steps~~said interpreting then ~~including a step to~~
~~check~~comprising checking that the input-output module selected
at a determined physical location is compatible with the
~~structured-type object configured at the same~~ determined
physical location.

7. (Currently Amended) ~~Programming~~ A programming
station for programming automation equipment, comprising:
memory means of memorization for storing and
display displaying data,; and
means of for interaction with a designer of an automation
application program (10), ~~characterized in that the~~
~~programming station comprises;~~

an editor of symbolic variables—(100)—to generate for
generating a configuration table—(6)—stored en-in the memory
means, ; ~~the programming station also includes~~

~~several~~ a plurality of tables—(1.1, 1.2)—of structured
type object elements stored en-in the memory means, ; and

means of for interpreting an application program—(10)—
comprising at least one symbolic variable—(100)—defined by the
an application designer using the said editor.

8. (Currently Amended) The programming station
~~Programming station~~ according to claim 7, ~~characterized in~~
~~that it comprises~~ further comprising means of for compiling the
an application program interpreted by said interpretation
means to transform the interpreted application program into an
executable automation application ~~that can be executed~~ for
execution on an automation equipment.

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9. (Currently Amended) The programming station
~~Programming station~~ according to claim 8, characterized in
~~that it comprises~~ further comprising means ~~of~~ for transferring
the executable automation application onto either portable
memory means compatible with ~~the~~ such automation equipment, or
directly onto the memory means of ~~the~~ such automation
equipment.